

Amendments to the Specification

Please replace the paragraph of pages 3 (between lines 18-25) and 4 (between lines 1-3) with the following amended paragraph:

In accordance with one aspect, the present invention provides an apparatus for adaptively detecting received signals for power line communication, comprising: a main control unit (MCU) interface unit for adjusting a timing of data transmission; a register unit for storing control data, a threshold value, an offset value, and an error rate received from the MCU interface unit, and for outputting the stored data and values; a control logic unit for controlling a selection of a threshold value, based on the control data stored in the register unit; a reference data selecting unit for selectively outputting, as threshold values, the threshold value and offset value respectively stored in the register unit or an external threshold value and an external offset value, under control of the control logic unit; and a data processing unit for determining, based on threshold values to be selectively outputted by the reference data selecting unit, whether or not the serial data received via a power line is ~~effective~~ valid data, and for outputting the data.

Please replace the paragraph of page 4 (between lines 4-13) with the following amended paragraph:

The data processing unit may comprise: a data shift unit for shifting the serial data received via the power line, thereby outputting the data in parallel; a comparing unit for comparing the output signal from the data shift unit with the offset value selectively outputted from the reference data selecting unit; a first compressing unit for compressing an output signal from the comparing unit; a second compressing unit for re-compressing an output signal from the first compressing unit; a summing unit for summing output signals from the second compressing unit; and a determining unit for comparing an output signal value from the summing unit with the threshold value selectively outputted from the reference data selecting unit, thereby determining whether or not the output signal value from the summing unit is ~~effective~~ valid data, and for transmitting the determined value to the MCU.

Please replace the paragraph of page 4 (between lines 14-24) with the following amended paragraph:

In accordance with another aspect, the present invention provides a method for adaptively detecting received signals for power line communication comprising the steps of: (a) receiving control data, a threshold value, an offset value, and an error rate from a main control unit (MCU), storing the received data and values, and then waiting for receiving serial data via a power line; (b) if serial data is received at the step (a), then determining, based on the threshold value and offset value, whether or not the received serial data is ~~effective~~ valid data; (c) if it is determined at the step (b) that the received serial data is ~~effective~~ valid data, then outputting a determination value of the ~~effective~~ valid data; (d) if it is determined at the step (b) that the received serial data is ~~ineffective~~ invalid data, then incrementing the number of errors; and (e) if the number of errors incremented at the step (d) is not less than a predetermined allowance value, re-setting the threshold value and offset value as a new threshold value and a new offset value.

Please replace the paragraph of pages 4 (line 25) and 5 (between lines 1-4) with the following amended paragraph:

The step (b) may comprise the steps of: (b-1) converting the received serial data into parallel data, and then comparing the parallel data with the offset value; (b-2) compressing signals obtained after the comparison at the step (b-1), and summing the compressed signals; and (b-3) comparing the signal obtained after the summing at the step (b-2) with the threshold value, thereby determining whether or not the received serial data is ~~effective~~ valid data.

Please replace the paragraph of page 6 (between lines 12-24) with the following amended paragraph:

The reference numeral 18 denotes a data processing unit for determining, based on the threshold values to be selectively outputted by the reference data selecting unit 16, whether or not the serial data received via the power line is ~~effective~~ valid data, and for outputting the received data. The data processing unit 18 includes a data shift unit 181 for shifting the serial data received via the power line, thereby outputting the data in parallel, a comparing unit 183 for comparing the output

signal from the data shift unit 181 with the offset value selectively outputted from the reference data selecting unit 16, a first compressing unit 185 for compressing an output signal from the comparing unit 183, a second compressing unit 187 for re-compressing an output signal from the first compressing unit 185, a summing unit 189 for summing output signals from the second compressing unit 185, and a determining unit 191 for comparing an output signal value from the summing unit 189 with the threshold value selectively outputted from the reference data selecting unit 16, thereby determining whether or not the output signal value from the summing unit 189 is ~~effective~~ valid data.

Please replace the paragraph of page 8 (between lines 11-22) with the following amended paragraph:

That is, in the data processing unit 18 of the received signal detecting apparatus, its data shift unit 181 shifts the inputted received serial data, thereby outputting the received data in parallel. The comparing unit 183 compares the output signal from the data shift unit 181 with an offset value, that is, a first threshold value selectively outputted from the reference data selecting unit 16, thereby outputting a signal indicative of the result of the comparison. The comparison result signals outputted from the comparing unit 183 is compressed by the first compressing unit 185, re-compressed by the second compressing unit 187, and then summed by the summing unit 189. The output signal from the summing unit 189 is applied to the determining unit 191. In the determining unit 191, the output signal from the summing unit 189 is compared with the threshold value outputted from the reference data selecting unit 16 in order to determine whether or not it is ~~effective~~ valid data. Based on the result of the determination, the determined value is applied to the MCU.

Please replace the paragraph of page 10 (between lines 14-20) with the following amended paragraph:

The 54 data are re-arranged in the first compressing unit 185, so that they are compressed into 18 data of two digits. These 18 data of two digits are finally compressed into 5 data of four digits in the second compressing unit 187. The 5 data of four digits are finally summed together in the summing unit 189. The value obtained by the final summing unit 189 is compared with the

second threshold value by the determining unit 191 in order to finally determine whether or not it is ~~effective~~ valid data. The result value of the computation is stored in a separate memory so that it is transmitted to the MCU, if necessary.